PROJECT MANGEMENT PLAN EXAMPLES

Prepare Project Support Plans and Documentation – Technical Baseline Development and Control Examples

Example 40

5.0 PROJECT MANAGEMENT AND CONTROL

The Project Management and Control section provides an overview of the project management and control systems that will be used to manage the 324/327 Buildings Stabilization/Deactivation Project, addressing the following key elements of project management and control:

- Project Management Control System (PMCS)
  - Work breakdown structure
  - Baseline development/update
  - Scheduling
  - Performance measurement and reporting
  - Change control
- Information and reporting
  - Project status report
  - Project manager's monthly report
  - FDH/RL project status review
  - DOE-HQ project management reviews
  - Special reviews

5.1 Project Management Control System

The Project Management and Control System (PMCS) for the 324/327 Buildings Stabilization/Deactivation Project is consistent with the current WHC-CM-2-5, *Management Control System* (as adopted through FDH-MD-001, Rev. 1). The PMCS provides a consistent approach to be used throughout the project. The primary goal of this management system is to ensure planning and implementation of this project is conducted in a manner that is technically sound, timely, and cost effective.

In addition, the system is designed to have an upward flow of integrated, summarized information from BWHC to FDH, to RL, to DOE-HQ, ensuring that the project team can make timely management decisions, accomplished by the following process:

- Develop an integrated plan and accomplish the project objectives in a cost effective manner using demonstrated and innovative technology where appropriate.
- Provide a WBS that defines the project in a disciplined manner from the top project level to the detailed, manageable work packages. A technical scope of effort and associated schedule and budget are established and responsibility for performance is assigned for each work package.

- Ensure that the PMCS is capable of organizing, planning, scheduling, budgeting, accounting, and reporting work in a timely, consistent manner.
- Obtain technical, schedule, cost, and funding information in the format and to the level of detail necessary to meet management and reporting needs.
- Integrate the submitted data to compare the project status and progress to planned accomplishments.
- Evaluate and analyze the resulting information; identify key problems that require management decision and corrective actions be taken.
- Correlate the project funding profile with planned commitments, expenditures, and work accomplished to date.
- Prepare and control changes that affect established work scope, budgets, and schedules.

5.1.1 Work Breakdown Structure

The WBS will be developed in accordance with HNF-MD-013, Rev. 0, *Work Breakdown Structure* . The management directive provides responsibilities, requirements, and the process for development, review, and approval of the Project Hanford WBS and contractor WBS, index, and dictionary, during implementation of the Project Hanford Management Contract (PHMC).

The 324/327 Buildings Stabilization/Deactivation Project WBS has been developed to provide a basis for scope definition, resource planning, and project implementation and control. The WBS is based on the combination of two methodologies. The Minimum Safe Subproject (Chapter 3.0, Section 3.2.1), was developed using a requirements-based approach (i.e., Surveillance, Maintenance, Project Management, Utilities and Assessments). The Stabilization/Waste and Risk Reduction Subprojects (Chapter 3.0, Section 3.2.2) and the Deactivation Preparation Subprojects (Chapter 3.0, Section 3.2.3), are based on a logical flow of activities required to meet desired endpoints.

In March 1998, the endpoint criteria document was updated for both the 324 and 327 Buildings (Chapter 7.0). When complete, deactivation endpoint criteria and activities will meet the deactivation mission objectives. The current areas and systems defined in the draft endpoint criteria documents are the major subprojects included in the WBS. Discreet project activities are identifiable within the lower level WBS, and linked together (schedule logic) or sequenced-based on the planned order in which the actual work will be completed. Completing endpoint objectives within these subprojects will be defined and traceable through the WBS.

WBS dictionaries will be prepared at the subproject level for inclusion in the MYWP. The dictionaries will include a summary-level statement of the technical scope, key milestones, key interfaces, and subproject assumptions. Lower-level WBS dictionaries can be developed at the discretion of the subproject manager.

5.1.2 Baseline Development/Update

Subproject baselines will use the Project Hanford ABC Preparation Template as guidance for developing and documenting baseline activities. The following steps will be used as a guide in developing or updating the Project and subproject baselines:

- Develop a subproject baseline or subproject baseline modification by identifying and defining the desired outcomes (endpoint). Define the endpoint in sufficient detail to describe the following:

  - Subproject goal and objectives
  - Major project elements and activities
  - Technical, functional, and regulatory requirements
  - Enabling assumptions
  - Key interfaces and dependencies (intra-, inter-project)
  - Key deliverables and milestones.

-
- Determine whether the baseline change/addition requires updating the Project baseline or multiple subproject baselines, or whether it is a scope change requiring the addition of one or more subprojects.

  - Communicate change/update requirements to Baseline Control
  - If a baseline change request (Section 5.1.5) is required, assist in developing the appropriate change control documentation.

- Draft the new or modified WBS. Use right-to-left planning (i.e., completion of subtask Z, the project endpoint, requires completion of subtasks X and Y).
- Develop lower level WBS descriptions, assumptions, and alternative approaches to task completion (if appropriate).
- Complete the subproject plan, including technical scope and resource- and timed-phased schedules, using the Project Hanford ABC Estimating Preparation Template.
- Document project scope, cost, and schedule risks. Rank project risks based on an evaluation of potential impact to completing the subproject scope within the regulatory, schedule, and cost baseline (low, medium, and high) (Chapter 12.0). As appropriate, develop a risk management plan including risk mitigation strategies.

On completion of this baseline development and update process, provide a draft to the facility manger, project director, and project baseline control manager for review and approval. The project baseline control manager will determine the appropriate change control level for updating the Subproject Baseline, 300 Area Project Baseline (Project Baseline Summary or MYPP), and/or potential impacts to the Hanford Site Strategic Plan. If required, the change will be presented to the BWHC Change Control Board.

5.1.3 Scheduling

Developing and maintaining the project schedule will be in accordance with HNF-MD-014, Rev. 1, *Scheduling* . The subproject management team will develop subproject schedules at a level that allows for performance measurement and making decisions (i.e., inter- or intra-subproject prioritization). Developing and maintaining the schedules includes assessing the impact of factors, such as delays, equipment failures, procurement lead time, productivity, resource availability constraints, and facility outages. In addition, the project critical path will be identified and maintained on a real-time basis. The subproject scheduler, along with the subproject manager, will update schedules daily, weekly, or monthly, to effectively manage and integrate inter- and intra-subproject activities. The Subproject management team will define issues and concerns that may affect key milestones, performance agreements, and higher level deliverables (i.e., DOE requests, Tri-Party Agreement milestones, DNFSB actions, etc.), or affect the critical path of the Project or Level I Subproject. The scheduler also will develop subproject corrective action plans as required.

5.1.4 Performance Measurement and Reporting

The subproject manager will communicate subproject technical issues and accomplishments, schedule performance, cost and schedule issues, and corrective action plans, as appropriate, in the Project Directors' weekly 'Path Forward' meeting. However, the primary performance measurement for reporting subproject performance is provided by the performance measurement system. Within the new common database containing core information on Project Hanford, called HANDI 2000, the performance measurement system compares the resource-loaded schedules (budgeted cost of work scheduled [BCWS]), the actual cost of work performed (ACWP), and the actual work completed (budgeted cost of work performed [BCWP]), monthly. The subproject scheduler will meet with the subproject manager and/or cost account manager near the end of the reporting period or the fiscal month, to determine the status of work in progress or scheduled to start during the month, based on the earned value assigned to each activity. This effort results in the monthly BCWP.

Following the final month-end processing of actual cost within the Financial Data System (FDS), the Subproject Planner, Scheduler, and Analyst, will generate performance reports that will compare BCWP to BCWS and ACWP, to determine the cost and schedule variances based on current month and fiscal year-to-date data. (One of the functional applications in HANDI 2000 is the FDS.) The data will be

presented in monthly report at the subproject or sub-subproject level, based on complexity and resource levels of the project activities (cost variance BCWP – ACWP and schedule variance = BCWP – BCWS).

In addition, the subproject planner/analyst will develop an estimate at completion (EAC), beginning no later than March, for the current fiscal year activities and out-year life-cycle activities, if required. The EAC will be based on detailed analysis of performance data and subproject managers' assessment of variances, performance, and any relevant changes to baseline scope. The EAC will be evaluated at the two-digit cost element level. (The one-digit cost element includes labor, materials, and contracts. The two-digit cost element detail includes type of labor, type of material, etc.) Development of the EAC should be an ongoing process, with updated information provided from daily, weekly, or monthly reviews with the Subproject management team.

Performance reporting will be in accordance with HNF-MD-018, Rev. 0, *Performance Reporting* . The management directive provides information for continuing a performance reporting process during implementation of the PHMC.

5.1.5 Change Control

Baseline change control will be developed and administered in accordance with HNF-MD-008, Rev. 0, *Baseline Change Control* . The management directive provides guidance for baseline change control during implementation of the PHMC. Responsibilities and requirements for management, administration, and use of the technical, schedule, and cost baseline control system are defined, including the process for preparing and implementing the baseline change request (BCR).

5.2 Information and Reporting

Management reporting provides timely and accurate data to apprise BWHC, FDH, and DOE management of current and projected project conditions. Information contained in these reports is obtained from the same database that supports day-to-day management by BWHC.

5.2.1 Project Status Report

Reporting for the 324/327 Buildings Stabilization/Deactivation Project is incorporated in the monthly PSR, prepared by BWHC for FDH and RL. The PSR summarizes performance and compares it with the technical, schedule, and cost baselines contained in the MYWP. The report provides the data required by the DOE-HQ process.

5.2.2 Project Manager's Monthly Report

The project manager's monthly report (PMMR) is a progress report, and includes the cost performance, the milestone schedule status, variance analysis, and issues. The report will be presented monthly to the Project director.

5.2.3 FDH/RL Project Status Review

FDH, RL, and BWHC will conduct a monthly project status review. The review will focus on significant accomplishments since the last meeting; expected accomplishments for the next month; major problems and issues facing the project; and current cost, schedule, and technical status. This review may be in conjunction with the PMMR, presented monthly to the Project director.

5.2.4 DOE-HQ Project Management Reviews

Throughout the project, RL will schedule regular (typically quarterly) DOE-HQ project management review meetings. The appropriate personnel from DOE-HQ, RL, FDH and BWHC will attend the meetings.

BWHC will be responsible for preparing and issuing the agenda and recording action items, agreements, and commitments that result from the meeting. Quarterly reviews focus on significant accomplishments since the previous meeting; expected accomplishment for the next quarter; major problems and issues facing the project; and current cost, schedule, and technical status.

5.2.5 Special Reviews

As required, RL, FDH, and BWHC will conduct special-topic project meetings to review progress, review issues and action items requiring management decisions, change actions, and other items as necessary. Special reviews include status to the stakeholders (i.e., IAMIT, Project Management Meeting with Ecology, etc.).

Example 41

5.3 BASELINE CHANGE CONTROL

The technical, schedule, and financial planning documents that comprise the official PFP Project baseline are contained as supplements in Section 11. These documents are subject to change control as specified in FDH Procedure HNF-PRO-533, *Change Control* . Implementation of these procedural requirements may be further specified in PFP specific procedures.

Project changes are processed in accordance with FDH Procedure HNF-PRO-533, *Change Control* , which establishes minimum change control requirements for the PHMC. The Hanford Integrated Site Baseline, made up of technical, schedule, and cost baselines that together define what is necessary to accomplish the Hanford Site clean up mission, is a management tool that defines and communicates site clean up activities, progress, and performance. The baseline management process presented in this procedure provides the methodology that FDH uses to control changes to the Integrated Site Baseline. The baseline management process ensures changes are made only in accordance with approved and documented requirements with appropriate authorization.

While the emphasis of this procedure is control of changes to technical, schedule and, cost baselines, a comprehensive approach is used to integrate those processes that affect change control. To that end, this procedure defines the integrated, comprehensive, change control process to include the following:

- Baseline Changes (Technical, Schedule, and Cost Baselines)
- Multi-Year Work Plans
- Project Plans
- Construction Activities
- Line Item Construction Projects
- Hanford Site Technical Baseline
- Annual Work Plans
- Indirect Funded Work Scope
- Tri-Party Agreement Milestones
- Defense Nuclear Facility Safety Board (DNFSB) Commitments
- Funding Transfers (Contract Control Points and Mission Areas)
- Advance Work Authorization.

Detailed change control procedures developed by the PHMC Team for managing PHMC scope must align and comply with the requirements of this procedure.